

THE NATURAL ENVIRONMENT

PURPOSE

This element of the Comprehensive Plan identifies environmentally sensitive areas within the City and sets forth goals and policies aimed at their management and protection. It builds upon Tukwila's June 1991 Sensitive Areas Ordinance, which formalized the City's long-standing concern with environmental quality, and the 2004 revisions to that Ordinance.

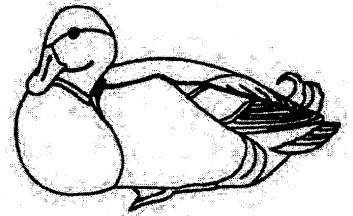
The impetus for the 1995 Comprehensive Plan update was the adoption by the State legislature of RCW 37.70A, the Washington State Growth Management Act (GMA) in 1991. In 1995, the Washington State legislature added a new section to the GMA requiring counties and cities to consider reliable scientific information when adopting policies and development regulations to designate and protect sensitive areas.

RCW 37.70A.172 (1) states communities "shall include the best available science in developing policies and regulations to protect the functions and values of critical areas," which are defined as wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas; frequently flooded areas; and geologically hazardous areas.

As a result of the new legislation and direction from the Growth Management Division of Washington's Office of Community Development, the City has reviewed its policies and regulations to ensure that best available science is incorporated into its sensitive area policies and regulations.

Washington State's Growth Management Act and the King County Countywide Planning Policies define critical and priority areas as wetlands, fish and wildlife habitats, conservation areas, areas with a critical recharging effect on aquifers used for potable water, frequently flooded areas, and geologically hazardous areas. It requires cities and counties to identify such areas within their jurisdiction and to adopt development regulations protecting them such as are expressed in Tukwila's Sensitive Areas Ordinance and in the goals of this element of the Comprehensive Plan.

In addition, the Growth Management Act requires jurisdictions to designate natural resource lands of "long-term commercial significance" and to adopt "development regulations to assure their conservation" (WAC 365-195-400(1)). Natural resource lands are those lands that have "long-term commercial significance" for agriculture, growing trees commercially ("forest lands"), and mineral resource lands. The GMA also states that "generally natural resource lands should be located beyond the boundaries



WETLANDS ROLE

*Flood and
Stormwater Control*

*Water Quality
Improvement*

Erosion Prevention

Sediment Trapping

*Groundwater Recharge
and Discharge*

Wildlife Habitat

of urban growth areas” (WAC 365-195-400(2)(b)). Through the comprehensive planning process, Tukwila has recognized that, as a highly urbanized area, the City's boundaries contain no significant natural resource lands. Therefore, policies in the Natural Environment Element are limited to critical areas and paleontological/archaeological areas.

Past development in the City has been relatively intense, and environmental restoration is a significant aspect of Tukwila's land use policies. There is a clear recognition that if the City's urban environment is to function for its citizens, its natural environment needs to be sensibly preserved and enhanced to promote recreational opportunities, to provide visual relief from the hard, constructed surfaces of urban life and to control and accommodate rainwater and manmade byproducts such as effluent.

This element of the Comprehensive Plan focuses on balancing land use and economic development practices with environmental protection. The aim is to provide sensible management of designated critical areas while maintaining and enhancing the important functions of these areas.

ISSUES

Geographically, Tukwila is a relatively small area within an extensive valley centered on the Green/Duwamish River drainage system. While the valley is virtually flat, the upland plateau has rolling and undulating topography. Development in the lowlands has required large amounts of fill, owing to the presence of wetlands and unstable soil conditions.

The uplands, while altered by clearing and residential development, still retain developable native soils. Owing to their different physical characteristics, the uplands and lowlands present different opportunities for and limitations on land use. (*Figure 5*)

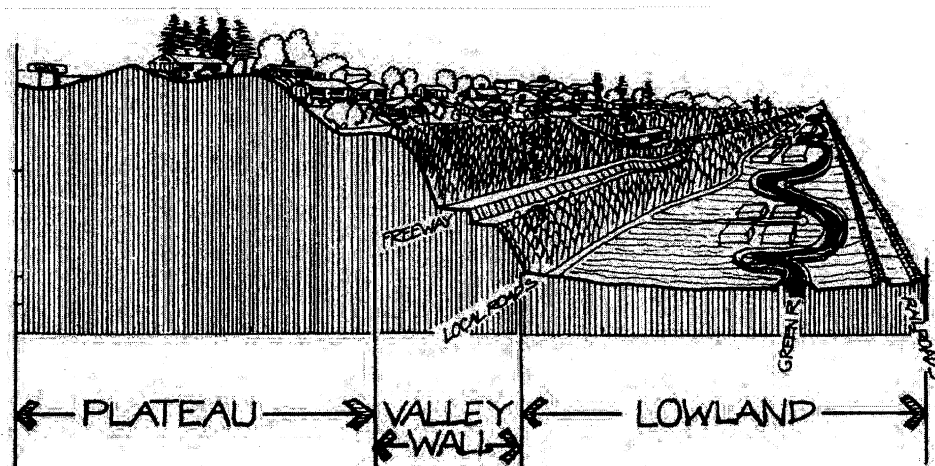


Figure 5 – Natural environment topographic limitations

When Tukwila was still a rural area, there were likely many more natural drainage corridors to carry runoff from showers and seasonal storms. Today, the few remaining natural stream corridors are no longer continuous open channel systems and must convey increased flows from surrounding developed areas. Tukwila experiences flooding and erosion problems, in various degrees of seriousness, every year. Development within the City and in areas to the west has led to increased runoff owing to the conversion of pervious soils to impervious surfaces, further deteriorating wetlands and stream corridors.

Construction of Howard Hanson Dam and river channel modifications reduced floodplain areas and made more land available for development. Even though the loss of natural wetlands has caused increased drainage problems in the valley, the area continues to be developed for commercial and industrial uses.

The upland plateau presents natural hazards associated with steep slopes that are unstable, and includes active landslides and wetland springs that will likely remain undeveloped.

There are natural coal areas within the City's upland plateau. Some of these formations have been mined and are defined as sensitive areas (based on City of Tukwila Abandoned Underground Coal Mine Hazard Assessment, May 1990).

GOALS AND POLICIES

Goal 4.1

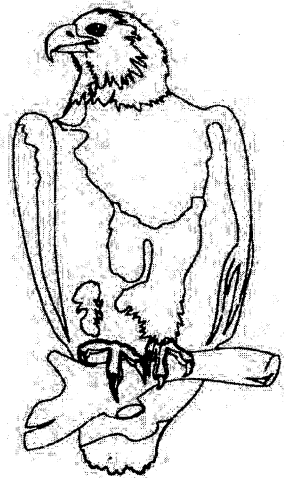
Retention and improvement of areas of potential geologic instability, wetlands and watercourses for wildlife habitat, recreational uses, water quality enhancement, and flood control functions.

Policies

4.1.1 *Regulate land use and development, using Best Available Science to protect natural vegetation and hydrology to prevent significant erosion, sedimentation, or degradation of areas of potential geologic instability, wetlands, watercourses, and their associated buffers.*

IMPLEMENTATION STRATEGIES

- ◆ Sensitive Areas Ordinance
- ◆ Land altering regulations
- ◆ Tree regulations
- ◆ Require 90% surface water design early in permitting process



- 4.1.2 *For new development and for some redevelopment, control peak runoff rates to predevelopment levels and minimize the effects of the small, frequent storm events. Maintain water quality to predevelopment levels; and prohibit direct discharge to downstream drainage systems unless allowed by specific regulations.*

IMPLEMENTATION STRATEGIES

- ◆ Sensitive Areas Ordinance
- ◆ Stormwater regulations

- 4.1.3 *Restore watershed function; encourage removal of piped sections of watercourses, where feasible and practical to create open channels for watercourse conveyance.*

- 4.1.4 *For new and existing development, prevent illicit discharge to downstream drainage systems.*

IMPLEMENTATION STRATEGIES

- ◆ Clean water educational programs for business community
- ◆ Storm water regulations
- ◆ National Pollutant Discharge Elimination System (NPDES) Permit Requirements
- ◆ Comprehensive Surface Water Management Plan and Ordinance

- 4.1.5 *Evaluate wetland mitigation strategies in order to better replace or preserve wetland functions, and also to provide development flexibility, as long as wetland functions are not degraded.*

- 4.1.6 *Require appropriate mitigation timed to ensure no net loss of water resource area functions.*

IMPLEMENTATION STRATEGY

- ◆ Mitigation completed or bonded prior to development

- 4.1.7 *In order to preserve the public benefit and values of wetlands and watercourses, protect existing vegetation and use supplemental native plantings in wetland and watercourse areas.*

IMPLEMENTATION STRATEGIES

- ◆ Examination of drainage basins to identify detention areas
- ◆ Stormwater regulation

4.1.8 *Allow off-site wetland and flood control mitigation where there is an equivalent benefit within the affected basin, no significant adverse impact to the adjacent property, and where it may be combined with City-sponsored programs.*

IMPLEMENTATION STRATEGIES

- ◆ Require early submission of mitigation proposals
- ◆ Sensitive Areas Ordinance

4.1.9 *Retain, enhance, or replace wetlands and watercourses through appropriate programs and projects for multiple purposes such as fish and wildlife habitat, flood control, stormwater detention, water quality improvement, and recreation.*

IMPLEMENTATION STRATEGIES

- ◆ Regional wetland detention areas for public and private off-site mitigation
- ◆ Sensitive Areas Ordinance
- ◆ Comprehensive Surface Water Management Plan and regulations

Goal 4.2

 **Protected fish and wildlife habitat.**

Policies

4.2.1 *Inventory, classify, and designate fish and wildlife priority habitats. Provide special consideration to anadromous fish.*

✓ 4.2.2 *Preserve and restore appropriate vegetation plantings in identified fish and wildlife habitat areas.*

4.2.3 *Enhance fish and wildlife habitat through water quality control measures, such as runoff control and best management practices to maintain aquatic systems.*

4.2.4 *Protect and manage Tukwila's priority habitat areas, and habitat corridors within and between jurisdictions.*

IMPLEMENTATION STRATEGIES

- ◆ Sensitive Areas Ordinance
- ◆ Coordination with the Department of Fish and Wildlife Priority Species Program
- ◆ Shoreline Overlay
- ◆ Comprehensive Surface Water Management Plan and regulations
- ◆ Tree Ordinance
- ◆ Consideration of WRIA 9 recommendations

NOTE: The implementation strategies identified above apply to Policies 4.2.1 through 4.2.4.

Goal 4.3



Reduced potential impacts and liabilities associated with development in areas of potential geologic instability.

Policies

- 4.3.1 *Require a professional review that reflects the potential degree of impact when development is proposed in a hazardous area.*
- 4.3.2 *Avoid potential hazards and minimize public or private costs through site design and access alternatives. Before approving development in areas of potential geologic instability, require that conventional measures to maintain slope stability be implemented, with the costs borne by the property owners.*

IMPLEMENTATION STRATEGY

- ◆ Sensitive Areas Ordinance

- ✓ 4.3.3 *Require areas where vegetation remains undisturbed and require significant replanting upon development.*

IMPLEMENTATION STRATEGY

- ◆ Tree Ordinance

Goal 4.4

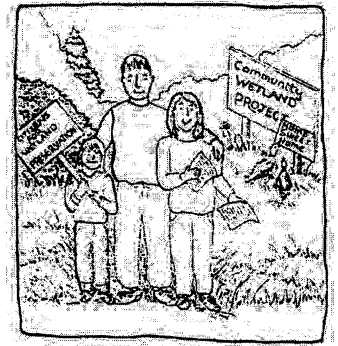
Citizens who understand Tukwila's ecosystems and act responsibly regarding their functions.

Policy

- 4.4.1** *Create an educational program for all segments of the community on the multiple purposes of the City's sensitive areas and on individual responsibilities regarding it, and sponsor joint City and citizen cleanup and rehabilitation programs.*

IMPLEMENTATION STRATEGIES

- ◆ Neighborhood- and City-sponsored clean ups and tree-planting programs
- ◆ Recycling programs
- ◆ "Adopt-a-Stream" program
- ◆ Backyard Wildlife Sanctuary Program
- ◆ Access features, such as trails and interpretation of sensitive areas



Goal 4.5

A system of water resources that functions as a healthy, integrated whole, and provides a long-term public benefit from enhanced environmental quality.

- 4.5.1** *Manage flood plains, rivers, groundwater, and other water resources for multiple uses, including flood and erosion hazard reduction, fish and wildlife habitat, open space, recreation and, where appropriate, water supply.*
- 4.5.2** *Evaluate the downstream impacts due to increased runoff volume. Protect downstream properties and modify the impacts through effective measures such as modification of upstream land uses.*

IMPLEMENTATION STRATEGIES

- ◆ Define drainage basin boundaries and identify surface water problems in each basin
- ◆ Create GIS inventory of City's existing surface water infrastructure
- ◆ Flood Plain Management regulations

Goal 4.6

Protected paleontological and archeological artifacts and sites.

Policy

- 4.6.1** *Inventory sites and adopt measures to ensure that paleontological and archaeological materials and site details are preserved for posterity.*

IMPLEMENTATION STRATEGIES

- ◆ Historic sites map
- ◆ Procedures for protection and mitigation